

The Canada-Ontario Agreement on Great Lakes Water Quality

The Agreement allows for greater co-operation between governments, including information transfer, coordination of programs, and the sharing of work and costs.

The first major accomplishment of the Canada-Ontario Agreement was to improve sewage treatment and thereby reduce the amount of phosphorus entering the Great Lakes. Prior to 1971, sewage treatment plants did not have the capability to remove phosphorus. In 1971, federal and provincial governments launched a \$1.6 billion program to upgrade treatment facilities in the Canadian Great Lakes Basin. To date, improvements have been made in over 200 communities, including 142 new treatment plants and the installation of special phosphorus removal equipment. The goal of this program is to ensure all communities in the Canadian Basin will have adequate sewage treatment facilities by the end of the decade.



Toronto skyline at sunset as seen from Toronto Island in Lake Ontario.

Copyright Provisions and Restrictions on Copying:

This Ontario Ministry of the Environment work is protected by Crown copyright (unless otherwise indicated), which is held by the Queen's Printer for Ontario. It may be reproduced for non-commercial purposes if credit is given and Crown copyright is acknowledged.

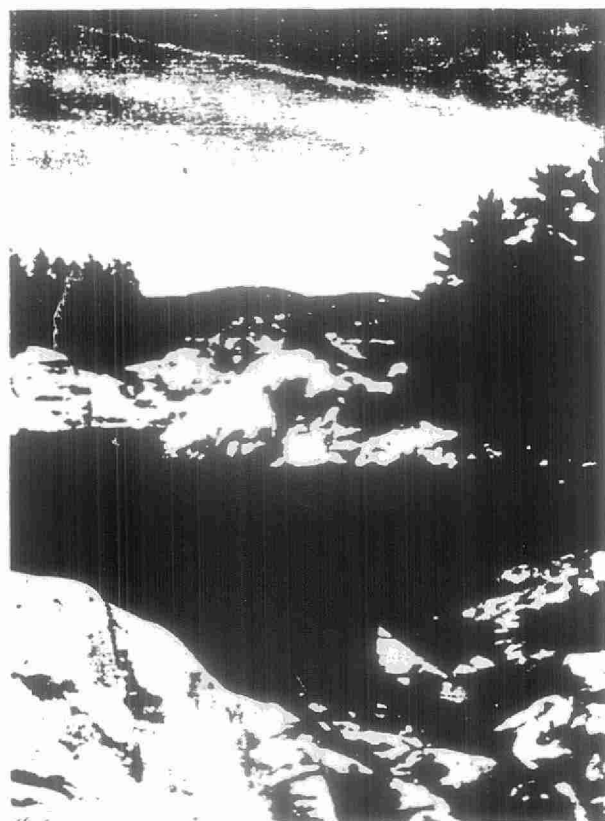
It may not be reproduced, in all or in part, for any commercial purpose except under a licence from the Queen's Printer for Ontario.

For information on reproducing Government of Ontario works, please contact ServiceOntario Publications at copyright@ontario.ca

The Government of Canada assisted in the phosphorus reduction program by restricting the amount of phosphate allowed in household laundry detergents in the early 1970s.

Steps taken by both Canada and the United States have considerably reduced the amount of phosphorus entering the Great Lakes. In Lake Erie, where the problem was most severe, the phosphorus in Canadian municipal sewage has been reduced by 82 per cent since 1972. Between 1973 and 1982, phosphorus levels in Lake Ontario fell by 44 per cent. As a result of this program, the excess growth of algae has been controlled and the water quality has improved dramatically in some areas.

Despite these initial successes, excess phosphorus still remains a problem in some parts of the Great Lakes. Canada-Ontario Agreement members are now taking steps towards the control of other sources of phosphorus, such as agricultural and urban runoff.



Scene from Georgian Bay, Lake Huron.

SURVEILLANCE

Monitoring the overall health of the Great Lakes is a major function of the Agreement. The surveillance program serves to investigate areas of water quality degradation and evaluate the impact of contaminants on the Great Lakes ecosystem. The program measures the effectiveness of clean-up programs, warns of emerging problems and tracks down sources of contamination. Surveillance programs have documented improvements

such as the decline of phosphorus in Lake Ontario and the reduction of mercury in Lake St. Clair.

Under the Agreement, surveillance near shore is carried out by the Ontario Ministry of the Environment, while offshore studies are the responsibility of Environment Canada and the Department of Fisheries and Oceans. Canada supplements the Ontario surveillance program with an annual contribution of \$1.2 million. Samples are studied from water and sediment, as well as fish, clams and other wildlife.

RESEARCH

Research on cleaning up the Great Lakes is co-ordinated under the Agreement and carried out by its member agencies.

Under the Agreement, a \$7 million program on urban drainage and municipal pollution abatement was carried out from 1971-1977. This study produced 111 research reports which examined sources of urban waste water discharged into the lakes, including wastes from sewage treatment plants, storm sewers, and industry. Much of the program focussed on sewage treatment, including the control of phosphorus and nitrogen, the disposal of sludge and the investigation of toxic chemical contamination. As a result of this program, the most cost effective method of reducing phosphorus in municipal sewage was determined.

THE NIAGARA RIVER

The Niagara River has been identified as the major source of many toxic chemicals in Lake Ontario. Under the Canada-Ontario Agreement, an environmental baseline report on the Niagara River was issued in 1980 and updated in 1981. The study found excessive levels of toxic chemicals in the fish and sediments of the river and identified major sources of contamination. This study resulted in increased surveillance of both the river and the sources of contamination.

All Canadian industrial and municipal plant discharges are being sampled, and discharge permits are being reviewed and upgraded. Landfill sites on both sides of the river are also being monitored.

Canada and Ontario are participating in joint programs with United States to clean up the river. An overall monitoring strategy is now being developed by the Niagara River Toxic Committee, a bilateral agency created in 1981.

For further information:

ENVIRONMENT CANADA
Ontario Regional Office
25 St. Clair Avenue East,
Toronto, Ontario M4T 1M2
Tel: (416) 973-6467

ONTARIO MINISTRY OF THE ENVIRONMENT
135 St. Clair Avenue West,
Toronto, Ontario M4V 1P5
Tel: (416) 965-7117

June 1985



Environment
Canada

Environnement
Canada

Working together under the Canada-Ontario
Agreement to improve Great Lakes water quality



Ministry
of the
Environment
Ontario